

## Floor Sweeper

### Background of the Invention

5 The present invention relates to floor sweepers. More particularly, although not exclusively, the invention relates to a motorised floor sweeper having auxiliary brushes that can clean up to an edge such as a skirting board for example.

10

Electric floor sweepers having motor-driven brushes are known. These comprise a transverse horizontal main brush including an array of radiating bristles - the brush being driven to rotate by an electric motor such that the tips  
15 of the bristles contact the floor surface and sweep dust and debris therefrom into a receiving bin within the sweeper body. Such floor sweepers having auxiliary brushes that rotate about a substantially vertical axis are also known. Such auxiliary brushes flank the  
20 transverse horizontal brush and are driven by a take-off mechanism therefrom. The ancillary brushes have bristles that project transversely of the sweeper body such that their tips extend to the edge of a room such as at a skirting board. Rotation of the main brush results in  
25 rotation of the auxiliary brushes. A problem associated with such devices is that the auxiliary bristles rob power from the main brush. Should the auxiliary brushes become jammed, the main brush will also jam.

Objects of the Invention

It is an object of the present invention to overcome or  
5 substantially ameliorate the above disadvantages and/or  
more generally to provide an improved floor sweeper having  
auxiliary brushes driven independently of a main sweeping  
brush.

10 Disclosure of the Invention

There is disclosed herein a floor sweeper comprising:

a body,

15 a main brush mounted to the body and extending  
transversely thereof and driven to rotate,

an auxiliary brush mounted to the body and driven to  
rotate about a substantially vertical axis independently  
of the main brush.

20 Preferably, the floor suite for further comprises an  
electric motor mounted within the body and driving the  
main brush.

Preferably, the floor sweeper further comprises a drive  
25 pulley attached to an output shaft of the electric motor,  
a driven pulley upon the main brush, and a drive belt  
extending about the drive pulley and driven pulley.

Preferably, the floor sweeper further comprises surface-engaging wheels attached to the body and wherein the auxiliary brush is driven to rotate by one of the surface-engaging wheels.

5

Preferably the floor sweeper further comprises another auxiliary brush - the main brush being flanked by the auxiliary brushes and wherein said another auxiliary brush is driven to rotate by another of said surface-engaging wheels.

10

Preferably, the floor sweeper further comprises a wheel pulley attached to each surface-engaging wheel and an auxiliary pulley attached to each auxiliary brush and a drive belt extending between each respective wheel pulley and auxiliary pulley.

15

#### Brief Description of the Drawings

20 A preferred form of the present invention will now be described by way of example with reference to the accompanying drawings, wherein:

Figure 1 is a schematic prospective illustration of key parts of an electric floor sweeper,

25

Figure 2 is a schematic cross-sectional plan view of a floor sweeper body encasing the key parts of Figure 1, and

- 5 Figure 3 is a schematic parts-exploded prospective illustration of the key parts of the floor sweeper as depicted in Figure 1.

Description of the Preferred Embodiment

10

In the accompanying drawings there is depicted schematically a floor sweeper body 10 typically fabricated from moulded plastics material. Mounted within the body 10 is an electric motor 11 that would typically received power from one or more rechargeable batteries housed within the body 10. The electric motor 11 drives a main brush 12 having bristles 13 extending radially therefrom. Do this end, the motor and 11 has a drive pulley 13 about which a bill to 14 extends. The belt 14 passes about a driven pulley 15 at one end of the main brush 12. Upon activation of the electric motor 11, the belt 14 causes main brush 12 to rotate about a horizontal axis such that the chips of the bristles for 10 contact a floor surface to thereby sweep debris into a dustbin 20 within the body 10.

The floor sweeper comprises a pair of auxiliary brushes 17 flanking the main brush 12. Biggs Hillary brushes 17

rotated about a substantially vertical axis and each comprise an auxiliary pulley 18.

There is a pair of floor-engaging wheels 16 mounted to the body 10 and these each have attached thereto a main wheel pulley 21 about which they belted 19 extends. Each belt 19 extends about a respective one of the auxiliary pulleys 18. As a result, motion of the body turned over a floor surface results in rotation of the ancillary brushes 17 in order to sweep dust and debris from a floor region immediately adjacent to a skirting board for example into the path of the main brush 12 that would in turn sweep that dust and debris into the dustbin 20.

It should be appreciated that modifications and alterations obvious to those skills in the art are not to be considered as beyond the scope of the present invention. For example, the auxiliary brushes 17 might be driven by an independent motor or motors. Furthermore, the main brush 12 might not be driven to rotate by an electric motor. Instead, it might be driven to rotate by a floor-engaging wheel.

The floor sweeper can be used to clean a floor surface and should one of the auxiliary brushes become jammed in use, this will not result in jamming of the main brush 12.